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CLAIMS:

1. A heat pipe for use in extracting heat from a semiconductor light source having an active region, the heat pipe comprising a transparent or translucent member of thermally conductive material and defining an optical transmission path therethrough, the heat pipe being adapted to be located proximate to the active region of the semiconductor device to extract heat, when in use.
2. A heat pipe according to claim 1 wherein said optical transmission path is provided by means of a channel which runs through the heat pipe.
3. A heat pipe according to claim 2, wherein said channel is arranged to receive optical transmission means.
4. A heat pipe according to any one of the preceding claims, wherein the transparent or translucent member comprises a hollow pipe with sealed ends.
5. A heat pipe according to any one of the preceding claims, at least partially filled with a cooling fluid, such as water deionised water (or any other suitable working fluid).
6. A heat pipe according to claim 5, wherein said cooling fluid is placed under a partial vacuum.
7. A heat pipe according to any one of the preceding claims, which transports liquid by capillary action.
8. A heat pipe according to claim 2 or claim 3, wherein a bundle of optical fibres or the like is disposed in said channel.

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9. A heat pipe according to claim 8, wherein said optical fibres are substantially circular in cross-section, the gaps between said optical fibres defining capillary channels by means of which heated coolant fluid (whether liquid or vaporised) can be transported towards the cool end of the heat pipe, and by means of which condensed liquid can be transported from the cool end of the heat pipe back to the hot end (closest to the active region of the device).
10. A heat pipe according to claim 9, wherein said optical fibres are located around the periphery of the heat pipe such that a channel is defined through the centre of the pipe, by means of which coolant fluid (whether liquid or vaporised) can flow.
11. A semiconductor light source including a heat pipe according to any one of the preceding claims.
12. A semiconductor light source according to claim 10, including a condenser.
13. A heat pipe substantially as herein described with reference to the accompanying drawings.
14. A semiconductor light source substantially as herein described with reference to the accompanying drawings.